



Faculty of Cyber Physical system

Department of IoT & Robotics Engineering

Course Title: Operating System Lab

Course Code: ICT 4260

Project Proposal

Submitted to:

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Project Title: HorizonXOS - cmd based Operating System

Introduction:

The purpose of this project is to design and develop a basic operating system named HorizonXOS that incorporates essential command features. HorizonXOS will provide users with a minimalistic yet functional environment, allowing them to perform tasks such as managing dates, accessing a calendar, reading and writing files, initiating shutdowns, and reboots, synchronization, process management.

1. Objectives:

1. Core Functionality: Implement essential operating system functionalities including process management, file management, memory management, scheduling logic and basic I/O operations.
2. Command Features: Develop a set of fundamental command features including a calendar, date management, file reading and writing capabilities, shutdown, and reboot functionalities.
3. User Interface: Design a simple and intuitive command-line interface for users to interact with the operating system.

2. Scope:

The scope of HorizonXOS will cover the development of a basic operating system with a focus on command-line interaction. The project will include advanced features such as memory management, scheduling, file handling

3. Methodology:

The development of HorizonXOS will follow interactive interface and user friendly command line. Where user can easily find the commands and modify files and directories easily.

4. Technologies:

- Programming Language: The operating system will be primarily developed in c# language.
- Testing and Debugging: Utilize appropriate tools and techniques for testing and debugging, ensuring the reliability and stability of HorizonXOS.
- Visual Studio and VMWare

5. Features:

1. CRUD operation on files.
2. Creating and deleting directory
3. Date, command list
4. File list
5. Calculator
6. Change directory

Conclusion

HorizonXOS aims to provide a hands-on learning experience for developers interested in operating system development. Through the implementation of basic command features, users will gain insights into the core principles of operating systems while having a functional environment for day-to-day tasks.